

ABSTRACT OF THE DISCLOSURE

On a substrate of a GaN FET, an undoped AlN layer, a GaN delta doped layer, an undoped GaN layer, and an undoped $\text{Al}_{0.2}\text{Ga}_{0.8}\text{N}$ layer are formed in sequence. Arranged on the undoped $\text{Al}_{0.2}\text{Ga}_{0.8}\text{N}$ layer are a Ti/Al/Pt/Au source ohmic electrode, a Pt/Au gate Schottky electrode, and a Ti/Al/Pt/Au drain ohmic electrode. Parallel conduction and gate leak are reduced or eliminated by the GaN delta doped layer.